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10/522,723	09/20/2005	Remi Jacques	264521US0PCT	8532
22850 7590 01/21/2011 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER ROYSTON, ELIZABETH				
ART UNIT 1747		PAPER NUMBER		
NOTIFICATION DATE 01/21/2011		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/522,723

Applicant(s)

JACQUES ET AL.

Examiner

Elizabeth Royston

Art Unit

1747

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6-15 and 17-34 is/are pending in the application.
- 4a) Of the above claim(s) 14, 15, 17, 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-13, 19-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-945)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/15/2010
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the limitation "wherein at least one oxide of a metal is introduced into the second tank of the furnace" does not further limit the language of newly amended claim 1, "introducing into the second tank at least one thinner or at least one metal oxide", as appears to be applicant's intent. For purposes of examination, the claim is interpreted as reading as "wherein the material introduced to the second tank of the furnace is at least one oxide of a metal".

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims 1-3, 6, 10, 19, and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagedorn (US PN 3024121) in view of Johnson (US PN 3627504), or in the alternative over Hagedorn (US PN 3024121) in view of Johnson (US PN 3627504), Bull (US PN 3203816), and Froberg (US PN 4358304).

With regard to claims 1, 6, 10, 19, 22, 23, Hagedorn teaches a process for the continuous preparation of a composition comprising silica in a furnace comprising at least two tanks in series (col. 4, line 7-8; figure 1, item 10 and 15), the process comprising introducing most of the silica into a first tank (col. 3-4, line 29-75, 1-7), melting most of the silica in the first tank (melting tank), transferring the silica to a second tank (forehearth), introducing into the second tank at least one thinner or metal oxide (col. 3, line 5-13, where the frit is a colored frit containing metal oxide), wherein the first tank is heated to a higher temperature than the other tanks of the furnace (col. 4, line 7-9, where the temperature of the glass must have been arrived at in the melting tank in order to be leaving the melting tank at that temperature), the temperature difference between the first tank and the other tank is at least 80°C, the first tank is heated to a temperature ranging from 1000 to 1350°C (col. 4, line 8-9, 2300-2600°F = 1260-1426°C) and the other tank or tanks are heated to a temperature of at most 1150°C (col. 4, line 18-19, 2070°F = 1132°C).

Although Hagedorn does not explicitly disclose the addition of a fluxing agent, since Hagedorn teaches the base glass contains Na_2O (col. 3, table I), the decomposition product of the fluxing agent as defined by applicant (specification, page 6, line 29-30), it would have been appreciated by one of ordinary skill in the glass art at the time of the invention that since the base glass composition contains a soda compound, that a soda fluxing agent was added to the initial mixture.

In the alternative, although Hagedorn teaches the presence of Na_2O (col. 3, table I), Hagedorn does not explicitly disclose adding a fluxing agent to the first tank.

Bull teaches that it was known in the art at the time of the invention to include a soda ash (NaCO_3) fluxing agent, the same fluxing agent as disclosed by Applicant that decomposes into Na_2O (Specification, page 6, line 29), with the initial molten stage of the melt (col. 3, line 10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include the fluxing agent in the teaching of Bull into the basic glass in the teaching of Keefer. The rationale to do so would have been the motivation provided by the teaching of Froberg, that to add a soda fluxing agent to the initial melt predictably results in the formation of an initial molten stage that hastens the dissolving of the silica and/or silicates (Froberg, col. 1, line 19-21).

Hagedorn does not explicitly disclose submerged burners in the first (melting) or second (forehearth) tanks.

Johnson teaches submerged burners in the first (melting) and second (forehearth) tanks (figure 2, item 13).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a submerged burner in the first (melting) tank in the teaching of Hagedorn. The rationale to do so would have been the motivation provided by the teaching of Johnson, that to use a submerged burner to melt the base glass predictably results in the efficient transfer of heat to the glass resulting in rapid melting of the glass (col. 4, line 28-32) and the ability to easily maintain within the glass desired levels of oxidizing or reducing conditions (col. 4, line 1-3). Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a submerged burner in the second (forehearth) tank in the teaching of Hagedorn. The rationale to do so would have been the motivation provided by the teaching of Johnson, that to have such a submerged burner in the second tank predictably results in the improved ability over stirrers (such as those used in Hagedorn, items 20 and 21) to quickly and uniformly mix the colorant with the base glass (col. 3, line 48-53).

With regard to claims 2 and 20, Hagedorn teaches at least 90% of the silica is introduced into the first tank, where the frit comprising the remaining silica is added to the second tank (forehearth) in a ratio of 40-to-1 to 400-to-1 (col. 3, line 20).

Hagedorn further teaches 100% of the fluxing agent is introduced in to the first tank (col. 3, table 1, the presence of Na_2O in the base glass).

In the alternative, Bull teaches that it was known in the art at the time of the invention to include a soda ash (NaCO_3) fluxing agent, the same fluxing agent as

disclosed by Applicant that decomposes into Na_2O (Specification, page 6, line 29), with the initial molten stage of the melt (col. 3, line 10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include the fluxing agent in the teaching of Bull into the basic glass in the teaching of Keefer. The rationale to do so would have been the motivation provided by the teaching of Froberg, that to add a soda fluxing agent to the initial melt predictably results in the formation of an initial molten stage that hastens the dissolving of the silica and/or silicates (Froberg, col. 1, line 19-21).

With regard to claims 3 and 21, Hagedorn teaches adding 100% of the frit to the second (forehearth) tank, where the frit composition itself is designed to lower the viscosity and surface tension, the definition of a thinner (col. 5, line 64-69).

6. Claims 7-9, 13, 24-26, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagedorn (US PN 3024121) in view of Johnson (US PN 3627504), or in the alternative over Hagedorn (US PN 3024121) in view of Johnson (US PN 3627504), Bull (US PN 3203816), and Froberg (US PN 4358304), as applied for claims 1-3, 6, 10, 19, and 20-23 above, and in further view of Eppler (US PN 4376169).

With regard to claims 7- 9, 13, 24-26, and 30, although Hagedorn does teach a frit composition with 40-70 wt% SiO_2 , 20 to 30% Na_2O (Table IX, composition 14), and 3 to 20% by weight of at least one additional metal oxide comprising chromium (table IX, Cr_2O_3) formed by melting the raw batch materials (col. 3, line 5-7), Hagedorn does not

explicitly disclose manufacturing the composition using the method of making colored glass. However, since Johnson teaches that the submerged burners allow for the direct addition of the colorant without the need to provide a frit carrier (col. 4, line 51-54), and since similar composition frits were known in the art at the time of the invention as being suitably created at temperatures of 1000 to 1200°C (Eppler, col. 2, line 45, 55-65), it would have been obvious to one of ordinary skill in the art at the time of the invention to make the frit in the teaching of Hagedorn using the method of making colored glass in the teaching of Hagedorn in view of Johnson. The rationale to do so would have been the motivation provided by the teaching of Johnson that using such a submerged burner method for mixing a colorant into a base glass melt (as in the teaching of Hagedorn) predictably results in the uniform incorporation of colorants into the base glass (Johnson, col. 3, line 51-53) in addition to the ability to strictly control the final color of the glass (Johnson, col. 2, line 49-54), where one of ordinary skill in the art at the time of the invention would appreciate homogeneity in the frit (Eppler, col. 2, line 50-51) as being desirable for uniformity in products created using the frit.

7. Claims 11, 12, 28, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagedorn (US PN 3024121) in view of Johnson (US PN 3627504), or in the alternative over Hagedorn (US PN 3024121) in view of Johnson (US PN 3627504), Bull (US PN 3203816), and Froberg (US PN 4358304), as applied for claims 1-3, 6, 10, 19, and 20-23 above, and in further view of Plumat (US PN 3429684).

With regard to claims 11, 12, 28, 29, and 31, Hagedorn in view of Johnson does not explicitly disclose a third tank.

Plumat teaches that it was known in the art at the time of the invention to have a withdrawal tank at 1000°C (col. 2, line 41-43) following the hearth (col. 3, line 24-36).

Although Hagedorn teaches that the glass is withdrawn from the forehearth for use in molds (col. 3, line 1-4), it would have been appreciated by one of ordinary skill in the art at the time of the invention that the glass in the teaching of Hagedorn could be utilized for purposes aside from forming molded glass products. In this case, it would have been obvious to one of ordinary skill in the art at the time of the invention to have a conditioning withdrawal tank as in the teaching of Plumat following the hearth in the teaching of Hagedorn in view of Johnson. The rationale to do so would have been the motivation provided by the teaching of Plumat, that to have such a withdrawal conditioning tank predictably results in the ability to regulate and thermally homogenize the molten glass so that at the points of withdrawal the entire molten glass mass is exactly at the required temperature (col. 2, line 5-9). It furthermore would have been obvious to one of ordinary skill in the art at the time of the invention to maintain a burner in such a tank so as to ensure the homogenous control of the cooling process by providing uniform mixing of the glass (Johnson, col. 5, line 1-6, 23-26, where smaller burners will produce appreciably less heat), as well as maintaining (Johnson, col. 3, line 56-59) the oxidizing or reducing properties in the glass (Johnson, col. 4, line 1-2) required for obtaining certain colors and glass characteristics. Furthermore, since Johnson teaches that the burners provide the necessary oxidizing or reducing

conditions required to obtain desired glass colors and characteristics (col. 3, line 54-59), and since Johnson teaches that the burners specifically control the color of the glass of some metal oxides by a color change obtained through increased oxidation (col. 2, line 49-54), it would have been obvious to one of ordinary skill in the art at the time of the invention that if a yellow-green glass was desired using a selenium or iron metal oxide, to optimize the oxidizing process and control the further oxidation of the metal oxide to a desired level.

8. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hagedorn (US PN 3024121) in view of Johnson (US PN 3627504), Eppler (US PN 4376169), and as evidenced by Neely (US PN 4199364), or in the alternative over Hagedorn (US PN 3024121) in view of Johnson (US PN 3627504), Bull (US PN 3203816), Froberg (US PN 4358304), Eppler (US PN 4376169), and as evidenced by Neely (US PN 4199364).

With regard to claim 32, Hagedorn teaches a process for the continuous preparation of a composition comprising silica in a furnace comprising at least two tanks in series (col. 4, line 7-8; figure 1, item 10 and 15), the process comprising introducing most of the silica into a first tank (col. 3-4, line 29-75, 1-7), melting most of the silica in the first tank (melting tank), transferring the silica to a second tank (forehearth), introducing into the second tank at least one metal oxide (col. 3, line 5-13), wherein the first tank is heated to a higher temperature than the other tanks of the furnace (col. 4, line 7-9, where the temperature of the glass must have been arrived at in the melting

tank in order to be leaving the melting tank at that temperature), the temperature difference between the first tank and the other tank is at least 80 °C, the first tank is heated to a temperature ranging from 1000 to 1350 °C (col. 4, line 8-9, 2300-2600 °F = 1260-1426 °C) and the other tank or tanks are heated to a temperature of at most 1150 °C (col. 4, line 18-19, 2070 °F = 1132 °C).

Although Hagedorn does not explicitly disclose the addition of a fluxing agent, since Hagedorn teaches the base glass contains Na₂O (col. 3, table I), the decomposition product of the fluxing agent as defined by applicant (specification, page 6, line 29-30), it would have been appreciated by one of ordinary skill in the glass art at the time of the invention that since the base glass composition contains a soda compound, that a soda fluxing agent was added to the initial mixture.

In the alternative, although Hagedorn teaches the presence of Na₂O (col. 3, table I), Hagedorn does not explicitly disclose adding a fluxing agent to the first tank.

Bull teaches that it was known in the art at the time of the invention to include a soda ash (NaCO₃) fluxing agent, the same fluxing agent as disclosed by Applicant that decomposes into Na₂O (Specification, page 6, line 29), with the initial molten stage of the melt (col. 3, line 10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include the fluxing agent in the teaching of Bull into the basic glass in the teaching of Keefer. The rationale to do so would have been the motivation provided by the teaching of Froberg, that to add a soda fluxing agent to the initial melt predictably

results in the formation of an initial molten stage that hastens the dissolving of the silica and/or silicates (Froberg, col. 1, line 19-21).

Hagedorn does not explicitly disclose submerged burners in the first (melting) or second (forehearth) tanks.

Johnson teaches submerged burners in the first (melting) and second (forehearth) tanks (figure 2, item 13).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a submerged burner in the first (melting) tank in the teaching of Hagedorn. The rationale to do so would have been the motivation provided by the teaching of Johnson, that to use a submerged burner to melt the base glass predictably results in the efficient transfer of heat to the glass resulting in rapid melting of the glass (col. 4, line 28-32) and the ability to easily maintain within the glass desired levels of oxidizing or reducing conditions (col. 4, line 1-3). Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a submerged burner in the second (forehearth) tank in the teaching of Hagedorn. The rationale to do so would have been the motivation provided by the teaching of Johnson, that to have such a submerged burner in the second tank predictably results in the improved ability over stirrers (such as those used in Hagedorn, items 20 and 21) to quickly and uniformly mix the colorant with the base glass (col. 3, line 48-53).

Although Hagedorn teaches a glass composition of 40-70 wt% SiO_2 , 20 to 30% Na_2O (Table IX, composition 14), and 3 to 20% by weight of at least one additional metal oxide (table IX, Cr_2O_3) formed by melting the raw batch materials (col. 3, line 5-7),

Hagedorn does not explicitly disclose manufacturing the composition using the method of making colored glass. However, since Johnson teaches that the submerged burners allow for the direct addition of the colorant without the need to provide a frit carrier (col. 4, line 51-54), and since similar composition frits were known in the art at the time of the invention as being suitably created at temperatures of 1000 to 1200 °C (Eppler, col. 2, line 45, 55-65), it would have been obvious to one of ordinary skill in the art at the time of the invention to make the frit in the teaching of Hagedorn using the method of making colored glass in the teaching of Hagedorn in view of Johnson. The rationale to do so would have been the motivation provided by the teaching of Johnson that using such a submerged burner method for mixing a colorant into a base glass melt (as in the teaching of Hagedorn) predictably results in the uniform incorporation of colorants into the base glass (Johnson, col. 3, line 51-53) in addition to the ability to strictly control the final color of the glass (Johnson, col. 2, line 49-54), where one of ordinary skill in the art at the time of the invention would appreciate homogeneity in the frit (Eppler, col. 2, line 50-51) as being desirable for uniformity in products created using the frit.

Hagedorn does not explicitly disclose the metal oxide is boron oxide, zinc oxide, or selenium oxide added to the second tank.

However, Hagedorn does teach a composition comprising boron oxide (table IX, composition 14), and that homogenization of the colorant with the base glass is improved by adding a composition with a lower viscosity and surface tension of the glass (col. 5, line 64-69) in the second tank (col. 2, line 60-62). It would have been obvious to one of ordinary skill in the art at the time of the invention to add the boron

oxide, known to reduce the viscosity of the glass (Neely, col. 2, line 2-4), to the second tank so as to aid in the homogenization of the colorant (metal oxide).

9. Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagedorn (US PN 3024121) in view of Johnson (US PN 3627504), or in the alternative over Hagedorn (US PN 3024121) in view of Johnson (US PN 3627504), Bull (US PN 3203816), and Froberg (US PN 4358304), as applied for claim 1 above, or over Hagedorn (US PN 3024121) in view of Johnson (US PN 3627504), Eppler (US PN 4376169), and as evidenced by Neely (US PN 4199364), or in the alternative over Hagedorn (US PN 3024121) in view of Johnson (US PN 3627504), Bull (US PN 3203816), Froberg (US PN 4358304), Eppler (US PN 4376169), and as evidenced by Neely (US PN 4199364), as applied for claim 32 above, and in further view of Apple (US PN 3244495).

With regard to claims 33 and 34, Hagedorn does not explicitly disclose conveying the composition from the furnace to a radiation-heated feeder.

Apple teaches conveying the composition from the furnace to a radiation-heated feeder (col. 3, line 53-55; figure 1, item 17) where the element-heated (col. 3, line 54) orifice designed to feed glass to the point of discharge (col. 3, line 72-74) is interpreted as reading on "a radiation-heated feeder".

It would have been obvious to one of ordinary skill in the art at the time of the invention to have a radiation-heated feeder as in the teaching of Apple at the exit to the furnace in the teaching of Hagedorn (Hagedorn, col. 3, line 1-4). The rationale to do so

would have been the motivation provided by the teaching of Apple, that to have such a radiation-heated feeder predictably results in the ability to control the viscosity of the glass travelling through the feeder, thereby allowing for the control the weight of the dispensed glass (col. 3, line 69-72).

10. Claims 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagedorn (US PN 3024121) in view of Johnson (US PN 3627504), or in the alternative over Hagedorn (US PN 3024121) in view of Johnson (US PN 3627504), Bull (US PN 3203816), and Froberg (US PN 4358304), as applied for claim 1 above, or over Hagedorn (US PN 3024121) in view of Johnson (US PN 3627504), Eppler (US PN 4376169), and as evidenced by Neely (US PN 4199364), or in the alternative over Hagedorn (US PN 3024121) in view of Johnson (US PN 3627504), Bull (US PN 3203816), Froberg (US PN 4358304), Eppler (US PN 4376169), and as evidenced by Neely (US PN 4199364), as applied for claim 32 above, and in further view of Boettner (US PN 4994099).

With regard to claims 35 and 36, since the method of Hagedorn in view of Johnson results in the glass mixed by the introduction of gases into the glass melt (col. 6, line 9-13), it would have been appreciated by one of ordinary skill in the art at the time of the invention that such a method would result in some formation/retention of gas bubbles within the glass melt.

Boettner teaches that finers were known in the art at the time of the invention as suitable for removing gas bubbles (col. 3, line 26-27) formed during the homogenization/mixing of molten glass (col. 3, line 16-18).

It would have been obvious to one of ordinary skill in the art at the time of the invention that since Hagedorn in view of Johnson teaches the addition of solid components into the glass followed by the homogenization of the glass, to remove any resulting gas bubbles with a subsequent fining zone. The rationale to do so would have been the motivation provided by the teaching of Boettner, that to use a fining zone predictably results in the removal of bubbles (col. 3, line 26-27) formed during the homogenization/mixing of molten glass (col. 3, line 16-18), where one of ordinary skill in the art at the time of the invention would appreciate that the presence of bubbles results in not only visual inclusions but also glass with heterogeneous physical properties dependent on the distribution of pockets of gas within the glass.

Response to Arguments

11. Applicant's arguments filed 10/22/2010 have been fully considered but they are not persuasive.

With regard to applicant's argument that the burners in Roberts were electrode burners, the examiner agrees. However, as applicant has not explicitly defined "burner" as referring exclusively a combustion burner, and since burners are defined by Merriam-Webster as "the part of a fuel-burning or heat-producing device where the flame or heat

is produced", the electrode burner in the teaching of Roberts was found to read on the broadly claimed "burner" of applicant's claimed invention.

12. Applicant's arguments with respect to claims 1-3, 6-13, and 19-31 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Royston whose telephone number is 571-270-7654. The examiner can normally be reached on M-F 9:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/E. R./
Examiner, Art Unit 1747

/Richard Crispino/
Supervisory Patent Examiner, Art Unit 1747